GAMBELL
HEALTH CLINIC

ALASKA RURAL PRIMARY CARE FACILITY

ASSESSMENT AND INVENTORY SURVEY REPORT

FEBRUARY 28, 2002

ALASKA NATIVE TRIBAL HEALTH CONSORTIUM

DENALI COMMISSION ALASKA

NSHC
Norton Sound Health Corporation

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1. EXECUTIVE SUMMARY

A. OVERVIEW

The purpose of this report is to document rural community health program clinic needs. Those needs have been assessed from several perspectives. This is the second stage of the planning and implementation process for improving the quality of rural primary care through capital improvements to community clinics.

The first stage was development of the "Alaska Rural Primary Care Facility Needs Assessment" dated 10/23/2000. The purpose in part of this effort was to establish base lines for the planning and implementation to follow. This second stage is to document rural community health clinic needs and conditions from several perspectives as follows:

1) A spatial assessment involving spaces (as-built floor plan) for comparison with pre-established Alaska Rural Primary Care Facility (ARPCF) space basis, as set forth in the ARPCF needs assessment dated 10/23/2000.
2) A code and condition survey of the existing facility
3) Identification of a site for a new facility (if applicable/decided) and the status of services to that site (road, electricity, water, sewer, etc.).
4) Documentation of functional inputs as communicated by local people or observed by the assessment team (Note: functional planning was a component of the needs assessment in the stage 1).
5) Development of options to facilitate programmatic and technical needs and deficiencies,
6) Costing of those options and
7) Recommendations as to the option or options that best address the clinic need and deficiencies[1].

ARPCF clinic basis were standards established in stage 1 based on population. They translate into three clinic sizes as follows:

Small Clinic
- Population: 20-100
- Space Standard: 1,535 gsf (heated)

Medium Clinic
- Population: 101-500
- Space Standard: 1,989 gsf (heated)

Large Clinic
- Population: 501+
- Space Standard: 2,459 gsf (heated)[2]

[1] There are only four options available in any rural community as follows: 1) New Facility, 2) Existing Facility renovations and or additions, 3) limited scope renovations and/or additions – driven by committed funding from either capital or operating perspectives (this option is not costable without scope or funding definition, 4) status quo (no change) (Note: any of these options can apply to combined facilities existing or envisioned.)

[2] The intent of the code and condition survey is to identify and cost deficiencies inclusive of spatial deficiencies. The accumulation of those costs is then intended to be compared to the cost of a new clinic. If the costs of renovations and additions exceed 75% of new construction then a new clinic option is considered viable.

Gambell has a population of 649 (2000 Census). The community reports that it is growing with approximately 75 births since the 2000 Census. This qualifies it for a larger size clinic of 2,459 gsf. The existing clinic is 2,490 gsf. It was built in two increments. The oldest portion was built around 1970. The newer portion, was built around 1996. It was constructed with grant money that was insufficient for the effort. The community as a result had to do much of the work themselves. There are unusual configurations in both the foundations and newer portion roof structure that should get a licensed structural review if this structure is to be renovated.

Key community issues and perspectives are as follows:

- Community is growing.
- Community is hiring a physician's assistant (not recognized by ARPCF standards).
- The facility is at the end of the sewer line and freezes up.
- The community wants a new clinic. It has a new clinic site in mind, adjacent to the fire station that they are currently constructing. The village owns the land and the mayor and councilman saw no problem in acquiring the land if it were for a good purpose or benefited the village, which a clinic would. This site is central to the community and immediately available. All utilities are available to this site. They like the Unalakleet clinic.
- The community would like to convert its existing clinic, in part, to housing for the physician's assistant.
- They want holding beds for isolation caused by weather.
- Noted functional deficiencies of existing clinics are:
  - No counseling room
  - Insufficient file space
  - Too small an office (three health aides share)
  - Single computer

Drawing "A4 Renovations and Additions Implication Floor Plan" demonstrates of the existing clinic. Although it is a community large enough, a configuration that does not totally disrupt operations is best achieved with a small addition.

B. Renovation/Upgrade and Addition

This option is as previously discussed under part A - Overview. The probable impacts of renovation and upgrade are diagramed in drawing A4 which is an overlay of ARPCF spaces onto the existing floor plan. To make this facility work means adding space beyond the ARPCF standards - reference drawing A5. It also should be pointed out that the village reports are true the village population is over 700 now. Renovations and additions is even more expensive that new construction, therefore the consulting team recommends a new clinic of commercial quality design for Gambell.

C. New Clinic

This option is as cost summarized in section A. Overview. It is based on ARPCF space standards set in stage I of this planning process and as costed under section 6 for new clinic analysis of this report for a medium size clinic. The community is interested in a new clinic. They have a site that is closer to utilities. They also envision reuse of the old clinic for housing with one potential occupant being a physician's assistant. A new clinic is recommended for this community.

2. GENERAL INFORMATION

A. PURPOSE OF REPORT AND ASSESSMENT PROCESS

ANTHC has entered into a cooperative agreement with the Denali Commission to provide management of the small clinic program under the Alaska Rural Primary Care Facility assessment, planning, design, and construction. Over 200 clinics will be inspected through the course of the program. The purpose of the Code and Condition survey report is to validate the data provided by the community in the Alaska Rural Primary Care Facility Needs Assessment and to provide each community with a uniform standard of evaluation for comparison with other communities to determine the relative need between the communities of Alaska for funding assistance for the construction of new or remodeled clinic facilities. The information provided in this report is one component of the scoring for the small clinic RFP that the Denali Commission sent to communities in priority Groups 3 4. The information gathered will be tabulated and analyzed according to a asset of fixed criteria that should yield a priority list for funding. Additionally, the relative costs of new construction vs. remodel/addition will be evaluated to determine the most efficient means to bring the clinics up to a uniform standard of program and construction quality.

A team of professional Architects and Engineers traveled to the site and completed a detailed Field Report that was revised by all parties. Subsequently, the team completed a draft and then final report of the facility condition.

B. ASSESSMENT TEAM

The survey was conducted on December 10, 2001 by Robert F. Bezek, Architect, Bezek Durst Seiser, Inc. and Charlie Chien M.E. PDC, Inc., and Lloyd Persson, ANTHC. ANTHC made introductions and conducted village briefings to ensure complete understanding of the inspection process. Village contacts were: Wilbur Booshu, Mayor; Winfred James Sr, Councilman/Former Mayor; Don Apangalook, Health Aide; and Ben Iknokinok, Health Aide. Team members who assisted in the preparation of the report from information gathered included members of the field team above and Robert Bezek, Bezek Durst Seiser, Inc., and Charlie Chien M.E. PDC, Inc.

C. REPORT FORMAT

The format adopted is a modified “Deep Look” format, a facilities investigation and condition report used by both ANTHC and the Public Health Service, in maintaining an ongoing database of facilities throughout the country. Facilities are evaluated with respect to building code compliance, general facility condition, and spatial deficiencies. The written report includes these evaluations, in addition to sketches of building construction details and identification of potential sites (where available) for a new clinic. This information is available for viewing at ANTHC’s Anchorage offices and will be held for reference.

D. SITE INVESTIGATION

On December 10, 2001, the team flew to the site and made observations, took photos, and discussed the needs with on-site personnel for the facility. Approximately four hours were spent on site, with sufficient time to investigate general foundations, structure, condition, mechanical and electrical systems, and to

interview the staff to assess current and projected health care needs. Interviews were conducted with Don Apangalook, health aide; the mayor, Wilbur Booshu; and a city councilman, Winfred James Sr. The city identified a location for a new site, next to the under construction fire station.

3. CLINIC INSPECTION SUMMARY

A. COMMUNITY INFORMATION

Population:

- 649 (2000 Census)
- 2nd Class City, Unorganized Borough, Yukon/Koyukuk School District, Doyon Limited

Location: Gambell is located on the northwest cape of St. Lawrence Island, 200 miles southwest of Nome, in the Bering Sea. The City is 36 miles from the Chukotsk Peninsula, Siberia. It lies at approximately 63d 47m N Latitude, 171d 45m W Longitude. (Sec. 03, T020S, R067W, Kateel River Meridian.) Gambell is located in the Cape Nome Recording District.

History: St. Lawrence Island has been inhabited intermittently for the past 2,000 years by both Alaskan and Siberian Yup'ik Eskimos. In the 18th and 19th centuries, over 4,000 people inhabited the island in 35 villages. Sivuqaq is the Yup'ik name for the village and for the Island. The City was renamed for Mr. and Mrs. Vene C. Gambell. A tragic famine between 1878 and 1880 decimated the population. In 1900, reindeer were introduced to the island for local use, and in 1903, President Roosevelt established a reindeer reservation. During the 1930s, some residents moved to Savoonga to establish a permanent settlement there. The City was incorporated in 1963. When the Alaska Native Claims Settlement Act (ANCSA) was passed in 1971, Gambell and Savoonga decided not to participate, and instead opted for title to the 1.136 million acres of land in the former St. Lawrence Island Reserve. The island is jointly owned by Savoonga and Gambell.

Culture: The isolation of Gambell has helped to maintain their traditional Siberian Yup'ik Eskimo culture, their language, and their subsistence lifestyle based upon marine mammals. Residents are almost completely bilingual. Walrus-hide boats are still used to hunt. The sale, importation or possession of alcohol is banned in the village.

Economy: The economy in Gambell is largely based upon subsistence harvests from the sea - seal, walrus, fish and bowhead and gray whales. Fox are trapped as a secondary source of cash income. Some reindeer roam free on the island, but most harvesting occurs out of Savoonga. Ivory carving and sale of archaeological artifacts are popular sources of income. The abundant number of seabird colonies provide an opportunity for limited tourism by bird-watchers. One resident holds a commercial fishing permit.

Facilities: Water is derived from wells and Troutman Lake, is treated and stored in three storage tanks. 116 homes are now connected to the piped water and sewer system. The schools and washeteria have individual water wells and septic tank systems. 37 homes in the original townsite still haul water and honey buckets. A Master Plan is underway. A new water source is needed to ensure no shortages will occur. The landfill is not permitted; the City wants to develop a new site.

Transportation: Gambell's isolated location on an island with no seaport results in heavy dependence upon air transport. The State-owned airport is currently under major improvements; it provides a 4,500' asphalt runway. Regular flights from Nome and charters from Unalakleet are available. Lighterage services bring freight from Kotzebue and Shishmaref.

Climate: Gambell has a maritime climate with continental influences in the winter. Winds and fog are common, and precipitation occurs 300 days per year. Average annual precipitation is 15 inches, including 80 inches of snowfall. The Bering Sea freezes during mid-November, with break-up at the end of May. Average summer temperatures are 34 to 48; average winter temperatures are -2 to 10. Extremes from -30 to 65 have been recorded.

B. GENERAL CLINIC INFORMATION

1) Physical Plant Information

The existing Gambell clinic is 2,490 gsf in size (see attached plan). The original facility was constructed in approximately 1970 with a major 1,000 plus/minus gsf addition in 1996 (see the attached existing floor plan for functional utilizations and relationships). It is a residential[3], wood frame building. The old portion is extremely depleted and has experienced some form of leaking resulting in stained ceilings. The new portion had budget problems and has field engineered roof framing that would require structural verification if the clinic were to be renovated.

[3] The use of the term residential has the following assumed meanings:
Structural – residential live loads usually range from 20 to 40 psf. The minimum live loads for clinics should be 50 psf in the office areas. For computer use areas the load can be as much as 100 psf. Operating rooms and laboratories are generally designed with a live load of 60 psf. With the village clinics being relatively small, an appropriate criteria would be to design the entire floor system at 60 psf with the exception of the record keeping area. This area should be designed for a minimum of 100 psf.

C. PROGRAM DEFICIENCY NARRATIVE

1) Space Requirements and Deficiencies

SPACE COMPARISON MATRIX

Current Gambell Actual SF to Denali Commission Medium Clinic

Alaska Rural Primary Care Facility

Purpose / Activity	Designated Itinerant			Current Clinic Actual Net S.F.			Large Clinic ARPCF SF			Difference		
	Size	No.	Net Area (SF)	Size	No.	Net Area (SF)	Size	No.	Net Area (SF)	Size	No.	Net Area (SF)
Arctic Entries				26	1	26	50	2	100			-74
Waiting/Recep/Closet				138	1	138	170	1	170			-32
Trauma/Telemed/Exam				214	1	214	200	1	200			14
Office/Exam				141	1	141	150	2	300			-159
Admin./Records				169	1	169	110	1	110			59
Pharmacy/Lab				158	1	158	80	1	80			78
Portable X-ray				181+224+191	3	596	40	1	40			556
Specialty Clinic/Health Ed/Conf.				184	1	184	150	1	150			34
Patient Holding/Sleeping Room				113	1	113	150	1	150			-37
Storage				105	1	105	120	1	120			-15
HC Toilet				84+70	2	154	60	2	120			34
Janitor's Closet (See Mechanical Room)							30	1	30			-30
												0
												0
Subtotal Net Area						1998			1570			428
Circulation & Net/Gross Conv. @45%						526			707			-181
Subtotal (GSF)						2524			2277			248
Mechanical Space @ 8%						67			182			-115
Total Heated Space						2591			2459			132
Morgue (unheated enclosed space)							30	1	30			-30
Ext. Ramps, Stairs, Loading		HC Accessible			As Required			As Required			As Required	

a. Overall Space Deficiencies: There is no overall space deficiency measured against the ARPCF. There is a 132 gsf overage.

b. Specific Room Deficiencies: Arctic entries and office exam.

c. Other Size Issues: Gambell was interviewing for a physicians assistant. They have space for his or her office.

2) Building Issues

a. Arctic Entries: The earlier building has a small arctic entry. The doors are not handicap accessible and it is not heated. The new facility front entrance has no arctic entry. The door simply opens into the waiting area. There is a back door to the new portion, at the end of the hallway, which is locked. It has a small wind shelter on the outside. The stairs, landing, and front entrance doors do not meet ADA accessibility standards. There's a wind shelter gable vent on the gable end of the new portion. There are also no eave vents on the old building portion and there is a similar vent on the gable end of the old portion. The front entrance portion is not handicap accessible. The ramp is too steep and it does not meet the rounded gravel condition at the bottom in a manner that a wheelchair could navigate to the clinic and then up the ramp if it got there. The site has rounded gravel, as does Point Hope.

b. Waiting / Reception: The waiting area seats six people. They say that it gets congested at times.

c. Exam / Trauma: On the plan, it's called emergency trauma. They felt this room was sufficient.

d. Exam Room: There are three other exam rooms, which along with the trauma room, makes four exam rooms total. One more than the large clinic standards suggest.

e. Office / Administration / Records: There are two offices. One is administration and records and the other is a physician assistant's office. A physician assistant is currently being recruited. Three health aides utilize the office/admin area, which contains the active medical records. It has a single computer, which creates congestion with the use of this space, and the size of the community creates greater storage needs than might be indicated by the clinic space standards.

f. Pharmacy / Lab: There is a pharmacy or meds room. You can't call it a lab; it has no sink, only a refrigerator.

g. Specialty Clinic / Health Education / Conference: There is a specialty clinic space. It is so full of storage that it would be difficult for visiting clinicians to set up and use the space.

h. Patient Holding / Sleeping Room: There is one with a bunk bed that is suitable for itinerants, but it's really not suitable for patient holding.

i. Storage: There is an old office space at the far end of the older portion of the building, opposite exam room number one (reference existing plan), that used for storage.

j. HC Toilet Facilities: The 1970's portion has a bathroom with an elevated tub that does not meet any handicap standards whatsoever. The newer portion, 1996, also has a restroom. This restroom does not fully meet handicap standards either.

k. Janitors Room: There is none specifically. There is a mechanical room that has a service sink beyond a door into the PA's office.

l. Mechanical/Boiler Room: There is a mechanical room that has a forced air furnace, a water heater, and a pump and meter for the water service. It is a very deficient mechanical room as it is too small. The finishes (floor, wall, and ceilings) are depleted. Door separations to adjoining spaces are depleted and not fire rated.

m. Ancillary Rooms: There are no specific ancillary rooms.

3) Functional Design Issues

This facility is functionally inadequate in its current condition. It would appear that there are too many exam rooms, which brings pressure to bear on other functions, such as office/admin and storage.

4) Health Program Issues

a. Patient comfort and privacy: The way out of the clinic is not particularly bad, but the older portion of the clinic has hollow core doors and no acoustical insulation in the walls. The newer portion has solid core doors, but there are still acoustical privacy issues in a small clinic of this nature. The staff reportedly uses the PA's office because the masking noise from the furnace makes this the most private office to have a conversation in. The facility was overheated at the time that we were there, indicating a poor quality heating system with very little control.

b. Medical/Infectious Waste: Medical/infectious waste is flown to Nome.

c. Infection Control: The old clinic has vinyl tile on the floors. It's chipped up in many areas and has ceiling tiles that were glued to gypsum board that are falling down, especially in the hallway and in several other areas.

d. Insect and Rodent Control: No reports of problems.

e. Housekeeping: The lack of an adequate janitors room makes housekeeping difficult.

5) Utilities

a. Water Supply: It's a piped community system. Representatives indicated that they do not drink the water because the piped water comes out rusty and has a bad odor/taste; therefore, they bring in drinking water and use the piped water only for other purposes.

b. Sewage Disposal: There is a city sewage system, which the building is connected to.

c. Electricity: Overhead lines.

d. Telephone: Overhead lines.

e. Fuel Oil: Yes.

D. ARCHITECTURAL / STRUCTURAL CONDITION

1) Building Construction

a. Floor Construction: Floors in both building portions appeared solid, as though there was underlayment under the vinyl tile and sheet vinyl. As there's no lighting in the crawl space of the building, some photographs were taken to indicate the type of structure. It's basically post and pad with wood frame floor above.

b. Exterior Wall Construction: Appears to be 2X6 in both portions of the building with 12 foot batt insulation or approximately R-19. Sheathing is T111.

c. Roof Construction: The old portion is a series of lumberyard trusses with gang nail plates, 2X6 top and bottom cords, trusses at 24 inches. The newer portion is do-it-yourself construction, 2X8 bottom cords and 2X12 rafters. Sort of a homemade truss-rafter configuration that is set up on 24-inch centers with posts received to fall on bearing walls down the hallway. Both roofs have 2 layers of 6-inch batt insulation for an R-38.

d. Exterior Doors: Wood doors with metal faces, typically.

e. Exterior Windows: Wood casement in the older portion of the building and Alaska Window PVC with insulating glass in the newer portion of the building. Only two window sizes, one new and one old, in the structure (windows are shown on plan).

f. Exterior Decks, Stairs, and Ramps: Wood framed. None of the stairs and/or ramps meet handicap standards.

2) Interior Construction

a. Flooring: The old portion is vinyl tile. The new portion is sheet vinyl.

b. Walls: The old portion is wood paneling and marlite in the exam rooms and wood paneling elsewhere. The new portion is FRP board, floor to ceiling.

c. Ceilings: Painted gypsum board in the new portion and gypsum board with glued up acoustical tiles in the older portion, except the bathroom and mechanical room (see finishes on floor plan).

d. Interior doors: The old portion has hollow core 1 3/8 inch doors. The new portion has solid core 1 ¾ doors. There is no ADA hardware in the entire facility.

e. Casework: Upper casework is residential, low-cost wood uppers and bases in the existing portion and a low-cost, melamine and light commercial, heavier residential in the newer clinic portions, not completely assembled.

f. Furnishings: Furnishings are old, worn out, and are a mismatch of many different years of procurement.

g. Insulation: Floor soffits are tightly enclosed with plywood. We assume that the insulation value of the floor is plus/minus R-38, as this was also done in the attic in the older portion of the building. Wall insulation R-19, assume 2X6 construction. Attic/roof insulation verified at R-38. Attic ventilation is at gable ends only.

h. Tightness of Construction: The facility is generally tight in its construction.

i. Arctic Design: The building is on treated wood footing pads and posts. Metal connecting plates from 1970 are highly corroded. This is a typical foundation for this sort of rounded gravel.

3) Structural

a. Foundations: Treated wood, post and pad on wood posts; connecting plates in the old building are very corroded, probably due to the salt air.

b. Walls and Roof: The older portion of the building is wood trusses at 24 inches on center. The new portion is sort of a combination truss-rafter do-it-yourself with 2X12 upper cords, 2X8 lower cords. Posts appeared aligned with walls in the hallway below.

c. Stairs. Landings, and Ramps: Wood frame, don't meet railing codes or handicap codes.

E. MECHANICAL CONDITION

1) Heating System

a. Fuel Storage and Distribution: Three separate oil storage and distribution systems serve the clinic building. A small (assumed 55 gal.) fuel tank serves the oil-fired heater in the waiting area. A large 250 gal. fuel tank serves the oil-fired furnace serving the original clinic portion of the building. A small (assumed 55 gal.) fuel tank serves the oil-fired space heater in the storage room adjacent to the furnace room in the original clinic portion of the building.

b. Furnace: An oil-fired furnace provides the warm air heating of the original clinic portion of the building. The unit appeared to be in poor condition and nearing the end of its service life. The combustion air intake in the furnace room for the oil-fired furnace has also been capped off.

c. Additional Heating Units: A small oil-fired space heater serves the waiting area at the main entrance and a small oil fired space heater is installed in the storage room adjacent to the furnace room in the original clinic portion of the building.

d. Heat Distribution System: Warm air distribution system is ducted throughout the original clinic portion of the building. No heat distribution system is provided in the new clinic portion of the building.

2) Ventilation System

a. System: The building is not equipped with mechanical ventilation system. The code required ventilation requirement is satisfied by the fact that most spaces are equipped with operable windows. The furnace serving the original clinic portion of the building does not appear to be equipped with outside air intake system to provide fresh air intake for the ventilation of the building.

b. Exhaust Air: The restroom in the original clinic portion of the building is equipped with a ceiling mounted exhaust fan. The unit appeared to be old and is noisy. The restroom in the new clinic portion of the building is not equipped with exhaust system.

3) Plumbing System

a. Water System: The building is served by the piped water supply system connected to the municipal piped water system. The system appears to be in good condition.

b. Sewer System: The building sewer system is connected to the municipal piped sewer system. The system appears to be in good condition although it is reported that the site sewer main serving this building experiences periodic freeze up during the winter months.

c. Fixtures: The fixtures observed at this building are in good condition but the restroom, laboratory, and clinical exam room fixtures do not conform to acceptable American Disability Act access and general patient care requirements.

F. ELECTRICAL CONDITION

1) Electrical Service

a. The electrical service for this clinic is a 100 amp 120/240 volt AC single phase three wire system with an underground supply from the utility.

b. The meter/service disconnect are badly corroded and in need of replacement.

2) Power Distribution

a. The feeder to the Main Distribution Panel (MDP) consists of three # 4 copper phase and neutral conductors and one #8 copper grounding conductor in a non-metallic sheathed cable. This is undersized for a 100 amp feeder per National Electric Code (NEC) 310-15 and Table 310-16.

b. The Clinic MDP is a 24 circuit Square D panelboard. The MDP currently has 10 spare breaker spaces.

c. The water heater is located in front of the MDP. The MDP is required to be “Readily Accessible” per NEC 240-24.

d. The feeder to the sub-panel is protected by a 60 amp circuit breaker.

e. The Clinic sub-panel is a 30 circuit G.E. panelboard. The sub-panel currently has 17 spares.

f. A desk is located in front of the sub-panel in the office. The sub-panel is required to be “Readily Accessible” per NEC 240-24.

3) Grounding System

a. The neutrals and grounds in the MDP are connected to the neutral bus. Neutrals and grounds must be isolated in all panels except service equipment, per NEC 250-142b.

b. The electrical service does not appear to have a grounding electrode system except for a single ground rod. Electrical services are required to be bonded to a grounding electrode system with a maximum resistance of 25 ohms, per NEC Article 250 Part C.

c. Interior metal piping of other mechanical systems is required to be bonded to the electrical service per NEC 250-104.

4) Exterior Elements

a. The clinic does not have exterior general use receptacles. The lack of exterior receptacles usually forces extension cords to be plugged in inside the building and routed through doorways, which is a violation of NEC Article 400.

b. It is recommended to install individual branch circuits and GFCI protected receptacles for automotive block heaters, commonly known as head bolt heaters.

c. Exterior lighting is provided by incandescent light fixtures mounted adjacent to the main entry to the clinic.

5) Electrical devices and lighting

a. Duplex receptacles are the grounding type.

b. The total number of receptacles does not appear sufficient for the equipment and loads in place in the clinic.

c. Receptacles not working in some parts of the clinic. Receptacle covers are missing in some rooms.

d. Lighting fixtures throughout the clinic are predominantly 4' surface mounted fluorescent fixtures with wrap around lenses and appear to be in good condition in the new addition.

e. Lighting fixtures in the original clinic are in poor condition.

f. The wiring in the clinic is primarily non-metallic sheathed cable (NM). Health Care Facilities are required to have all receptacles and fixed electric equipment, in patient care areas, supplied by circuits in grounded metal raceways with an insulated grounding conductor.

6) Emergency System

a. No exit lights are installed in the clinic at the exits. Exit lighting must be installed per IBC requirements. Building codes normally determine whether exit lighting is required.

b. Not all emergency lights are not working. Emergency egress lighting shall be powered and provide minimum footcandles levels, per IBC 1003.2.11. Branch circuits for emergency lighting shall comply with NEC 700-12.

7) Fire Alarm System

a. The clinic has one fire alarm pull station in the original clinic exit corridor. This corridor now leads into the new waiting room. Pull stations are to be located at the point of egress.

b. Battery operated smoke detectors are installed in some rooms in the clinic. Residential type smoke detectors must be Listed and Labeled for use in Clinic (B Use Group), per NEC 110-3b.

8) Telecommunication

a. The Data Telecommunications system currently provides service to the telephone system and the "Telemed" remote diagnostic system.

b. A wall mounted data cabinet is located in the office area.

c. Currently there is one phone jack in each room. The number of data and telephone outlets is not sufficient for the clinic's current and future needs.

G. CIVIL / UTILITY CONDITION

1) Location of Building

a. Patient Access: Centered in the community.

b. Service Access: Accessible by four-wheelers, similar to rest of community. Sort of a gravelly, beach-type community site.

c. Other Considerations: Facility is located in the utility area with the sewer and water system.

2) Site Issues

a. Drainage: This is a rounded gravel site. Drainage is thought to be good.

b. Snow: There is evidence of wind driven snow. There was a little bit of drifting on the ramp when we arrived.

3) Proximity of Adjacent Buildings

a. The clinic is close to all of the housing, reasonably close to the fire station, city offices, etc.

4) Utilities

a. Water Supply: City system

b. Sewage Disposal: City system – reports indicate the sewage system backs up.

c. Electricity: Overhead lines.

d. Telephone: Overhead lines.

H. EXISTING FACILITY FLOOR PLAN (SITE PLAN IF AVAILABLE:

We have attached drawings, as we have been able to identify, find, or create as part of this report. We have endeavored to provide all drawings for all the sites; however, in some cases exact existing site plans were not available. We have provided as indicated below:

A1 Existing Site Plan

A2 Existing Facility Floor Plan

A3 Existing Typical Wall Section

A4 Addition to Existing Facility Floor Plan

A5 Large Clinic Floor Plan

4. DEFICIENCY EVALUATION

A. DEFICIENCY CODES:

The deficiencies are categorized according to the following deficiency codes to allow the work to be prioritized for funding. The codes are as follows:

01 Patient Care: Based on assessment of the facilities ability to support the stated services that are required to be provided at the site. Items required for the patients social environment such as storage, privacy, sensitivity to age or developmental levels, clinical needs, public telephones and furnishings for patient privacy and comfort.

02 Fire and Life Safety: These deficiencies identify areas where the facility is not constructed or maintained in compliance with provisions of the state mandated life safety aspects of building codes including the Uniform Building Code, International Building Code, The Uniform Fire Code, NFPA 101, The Uniform Mechanical and Plumbing Codes and The National Electrical Code. Deficiencies could include inadequacies in fire barriers, smoke barriers, capacity and means of egress, door ratings, safe harbor, and fire protection equipment not covered in other deficiency codes.

03 General Safety: These deficiencies identify miscellaneous safety issues. These are items that are not necessarily code items but are conditions that are considered un-safe by common design and building practices. Corrective actions required from lack of established health care industry safety practices, and local governing body code safety requirements. I.e. Occupational Safety Health Administration (OSHA) codes & standards.

04 Environmental Quality: Deficiencies based on Federal, State and Local environmental laws and regulations and industry acceptable practices. For example this addresses DEC regulations, hazardous materials and general sanitation.

05 Program Deficiencies: These are deficiencies that show up as variations from space guidelines evaluated through industry practices and observation at the facility site and documented in the facility floor plans. These are items that are required for the delivery of medical services model currently accepted for rural Alaska. This may include space modification requirements, workflow pattern improvements, functional needs, modification or re-alignment of existing space or other items to meet the delivery of quality medical services. (Account for new space additions in DC 06 below)

06 Unmet Supportable Space Needs: These are items that are required to meet the program delivery of the clinic and may not be shown or delineated in the Alaska Primary Care Facility Space Guideline. Program modifications requiring additional supportable space directly related to an expanded program, personnel or equipment shall be identified in this section; for example additional dental space,

specialty clinic, storage, or program support space that requires additional space beyond the established program.

07 Disability Access Deficiencies: The items with this category listing are not in compliance with the Americans with Disabilities Act. This could include non-compliance with accessibility in parking, entrances, toilets, drinking fountains, elevators, telephones, fire alarm, egress and exit access ways, etc.

08 Energy Management: These deficiencies address the efficiency of lighting, heating systems/fuel types and the thermal enclosures of buildings, processes, and are required for energy conservation and good energy management.

09 Plant Management: This category is for items that are required for easy and cost efficient operational and facilities management and maintenance tasks of the physical plant.

10 Architectural M&R: Items affecting the architectural integrity of the facility, materials used, insulation, vapor retarder, attic and crawlspace ventilation, general condition of interiors, and prevention of deterioration of structure and systems.

11 Structural Deficiencies: These are deficiencies with the fabric of the building. It may include the foundations, the roof or wall structure, the materials used, the insulation and vapor retarders, the attic or crawl space ventilation and the general condition of interior finishes. Foundation systems are included in this category.

12 Mechanical Deficiencies: These are deficiencies in the plumbing, heating, ventilating, air conditioning, or medical air systems, interior mechanical utilities, requiring maintenance due to normal wear and tear that would result in system failure.

13 Electrical Deficiencies: These are deficiencies with normal or emergency power, electrical generating and distribution systems, interior electrical and communications utilities, fire alarm systems, power systems and communications systems within a building that should be repaired or replaced on a recurring basis due to normal wear and tear that would otherwise result in system failure.

14 Utilities M&R: This category is used for site utilities for incoming services to facilities that are required for the building to be fully operational. Deficiencies may include sewer and water lines, water wells, water tanks, natural gas and propane storage, electric power and telecommunications distribution, etc.

15 Grounds M&R: Real property grounds components that should be replaced on a recurring basis due to normal wear and tear. Deficiencies with respect to trees, sod, soil erosion, lawn sprinklers, parking, bridges, pedestrian crossings, fences, sidewalks & roadways, and site illumination etc. are considerations.

16 Painting M&R: Any painting project that is large enough to require outside contractors or coordination with other programs.

17 Roof M&R: Deficiencies in roofing, and related systems including openings and drainage.

18 Seismic Mitigation: Deficiencies in seismic structural items or other related issues to seismic design, including material improperly anchored to withstand current seismic requirements effect. The elements under consideration should include the cost incidental to the structural work like architectural and finishes demolition and repairs.

B. PHOTOGRAPHS

We have provided photographs attached which are noted to describe the various deficiencies described in the narratives and itemized in the summary below. The photos do not cover all deficiencies and are intended to provide a visual reference to persons viewing the report who are not familiar with the facility.

We have included additional photos as Appendix B for general reference. These are intended to add additional information to the specific deficiencies listed and to provide general background information.

C. COST ESTIMATE GENERAL PROVISIONS

1) New Clinic Construction

a. Base Cost: The Base Cost provided in Section VI of this report is the direct cost of construction, inclusive of general requirements (described below) and contingency for design unknowns (an estimating contingency). The base cost is exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The Project Factors and Area Cost Factor are multipliers of the base costs.

- General Requirements are based on Anchorage costs without area adjustment. It is included in the Base Cost for New Clinics. These costs are indirect construction cost not specifically identifiable to individual line items. It consists of supervision, materials control, submittals and coordination, etc. The general requirements factor has not been adjusted for Indian Preference.
- The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned.

b. Project Cost Factors

- Equipment Costs for new medical equipment has been added at 17% of the cost of new floor space.
- Design Services is included at 10% to cover professional services including engineering and design.
- Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.

- Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

c. Area Cost Factor: The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

d. Estimated Total Project Cost of New Building: This is the total estimated cost of the project, including design services. The construction contract will be work subject to Davis Bacon wages, and assumes construction before year-end 2001. No inflation factor has been applied to this data.

2) Remodel, Renovations, and Additions

a. Base Cost: The Base Cost provided in the specific deficiency sheets is the direct cost of construction, exclusive of overhead and profit, mark-ups, area cost factors and contingencies. Material costs for the project are all calculated FOB Anchorage and labor rates are based on Davis Bacon wages, regionally adjusted to Anchorage. Most of the deficiency items do not constitute projects of sufficient size to obtain efficiency of scale. The estimate assumes that the projects are completed either individually, or combined with other similar projects of like scope. The numbers include moderate allowances for difficulties encountered in working in occupied spaces and are based on remodeling rather than on new construction costs. Transportation costs, freight, Per Diem and similar costs are included in the base costs. The General Requirements, Design Contingency and Area Cost Factors are multipliers of the base costs.

- The cost of Additions to clinics is estimated at a unit cost higher than new clinics due to the complexities of tying into the existing structures.
- Medical equipment is calculated at 17% of Base Cost for additions of new space only and is included as a line item in the estimate of base costs.

b. General Requirements Factor: General Requirements Factor is based on Anchorage costs without area adjustment. The factor is 1.20. It is multiplied by the Base Cost to get the project cost, exclusive of planning, architecture, engineering and administrative costs. This factor assumes projects include multiple deficiencies, which are then consolidated into single projects for economies of scale. The general requirements factor has not been adjusted for Indian Preference.

c. Area Cost Factor: The Area Cost Factor used in the cost estimates for this facility is shown in Section VI of this report. The area cost factors are taken from a recent study completed for the Denali Commission for statewide healthcare facilities. The numbers are the result of a matrix of cost variables including such items as air travel, local hire costs, room and board, freight, fire protection equipment, foundation requirements, and heating equipment as well as contractor costs such as mobilization, demobilization, overhead, profit, bonds and insurance. These parameters were reconsidered for each village, following the site visit, and were modified, if necessary.

d. Contingency for Design Unknowns (Estimating Contingency): The Design Unknowns Contingency is an estimator's contingency based on the schematic nature of the information provided, the lack of any real design, and the assumption that any project will encompass related work not specifically mentioned. The factor used is 1.15.

e. Estimated Total Cost: This is the total estimated bid cost for work completed under Davis Bacon wage contracts, assuming construction before year-end 2001. This is the number that is entered in the front of the deficiency form. No inflation factor has been applied to this data.

f. Project Cost Factors: Similar to new clinics, the following project factors have been included in Section VI of this report.

- Design Services is included at 10% to cover professional services including engineering and design.
- Construction Contingency is included at 10% of the Base Costs to cover changes encountered during construction.
- Construction Administration has been included at 8% of the Base Costs. This is for monitoring and administration of the construction contract.

g. Estimated Total Project Cost of Remodel/Addition: This is the total estimated cost of the project including design services, the construction contract cost for work completed under Davis Bacon wages and assuming construction before year-end 2001. No inflation factor has been applied to this data.

5. SUMMARY OF EXISTING CLINIC DEFICIENCIES

The attached sheets document the deficiencies; provide recommendations on how to make repairs or accommodate the needs and provide a cost estimate to accomplish the proposed modifications. The summary addresses individual deficiencies. If all deficiencies were to be addressed in a single construction project there would be cost efficiencies that are not reflected in this tabulation.

These sheets are reports from the Access Data Base of individual Deficiencies that are compiled on individual forms and attached for reference.

Refer to Section VI. New Clinic Analysis for a comparison of remodel/addition to new construction.

6. NEW CLINIC ANALYSIS

The analysis of whether a new clinic is required is based on the Denali Commission standard of evaluation that "New Construction is viable if the cost of Repair/Renovation and Addition exceeds 75% of the cost of New Construction".

We have therefore determined the cost of a New Clinic Construction to meet the Alaska Rural Primary Care Facility (ARPCF) Space Guidelines for a village of 649 people (2000 Census). We have also determined the cost of Repair/Renovation & Addition to the existing Clinic to meet the same ARPCF Space Guidelines.

A. The cost of a New Denali Commission 2,459 SF Medium Clinic in Gambell is projected to be:

- Base Anchorage Construction Cost per s.f. $183
- Project Cost Factor: @ 45% $ 82
  - Medical Equipment 17%
  - Construction Contingency 10%
  - Design Fees 10%
  - Construction Administration 8%
- Multiplier for Village @ 1.782 $207

Adjusted Cost per SF $473

Projected Cost of a New Clinic: 2,459 s.f. x $473 = $1,164,018
(not inclusive of site development costs)

B. The cost of the Repair/Renovation and Additions for the existing Clinic are projected to be:

- Code & Condition Repairs/Renovations
  Cost from Deficiency Summary $418,361.77
- Remodel/Upgrade work (See Def. Code 01)
  100% of clinic 2,490 SF = 2,490 SF @ $144/SF $358,575.04
- Additional Space Required by ARPCF (See Def. Code 06)
  - Base Anchorage Cost $226
    - Medical Equipment $ 32
    - Additional Costs – $ 98
      - General Requirements 20%
      - Estimation Contingency 15%
  - `Multiplier for Village @1.782 $278

  Adjusted Cost per SF $633

Total Addition Cost of 300 SF @ $633 $190,063.36

Projected Cost Factor @28% $270,760.05
- Construction Contingency 10%
- Construction Administration 8%
- Design Fees 10%

Total Cost of remodel/addition $1,237,760

C. Comparison of Existing Clinic Renovation /Addition versus New Clinic:

Ratio of Renovation/Addition versus New Clinic is:

$1,237,760 / $1,160,648 = 1.07 x cost of New Clinic

Based on Denali Commission standard of evaluation; the remodel/addition costs are more than 75% of the cost of new construction. A new clinic is recommended for this community.

D. Overall Project Cost Analysis:

The overall project cost analysis below incorporates land, multi-use, utility costs, and road access costs, and project management fees if any are associated with the project.

Item	Quantity	Units	Unit Cost	Area Adjustment Factor	Total Cost	Allowable under "Small" Clinic Process (yes/no)
Primary Care Clinic (Allowable)	2,459	SF	$265.64	1.782	$1,164,018	yes
Clinic (Non-allowable portion)	0	SF	$265.64	1.782	$0	no
Land	15,000	SF	$2.00	1	$30,000	yes
Multi-Use Facility Design Cost	0	LS	$0.00	1	$0	yes
Multi-Use Facility Construction Cost	0	LS	$0.00	1	$0	no
Utility Extension/Improvements	1	LS	$15,000	1	$15,000	yes
Road access & parking lot improvements	1	LS	$5,000	1	$5,000	yes
Subtotal Project Cost					$1,214,018	
Project Management Fees					Unknown	
Total Project Cost					**Unknown**	

7. CONCLUSIONS AND RECOMMENDATIONS

Gambell qualifies for a large clinic. The existing clinic closely parallels this size. However, half the existing clinic is old and depleted and the other half, when added, ran short of money and has some non-conventional structure in the roof. There are additional questionable structural foundation ties between the to halves. The type of construction is residential versus commercial.

The community wants a new clinic. They have a site that is closer to utilities. They also envision reuse of the old clinic for housing with one potential occupant being a physician's assistant.

Renovations and additions versus new construction would cost 1.07 times new construction. Therefore the consulting team recommends a new clinic of commercial quality design for Gambell. Additionally, the consulting team suggests that due to reported community growth and Norton Sound's position on physician's assistants that additional architectural functional planning and project costing be conducted on this site prior to funding.

Note: Gambell has weather conditions that can strand patients needing transport for several days. Overnight, up to several days, patient care needs to be evaluated for this facility.

Appendix A: Specific Deficiencies Listings

The attached sheets represent the individual deficiencies identified for this project and the corrective action required to meet current codes and standards of construction. The deficiencies are further summarized in Section V. Summary of Existing Clinic Deficiencies.

Appendix B: Reference Photographs